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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,609	06/25/2003	Anthony J. Rawlinson	84690 3007 GNN	2427
20736	7590	08/09/2005	EXAMINER	
MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			WIEHE, NATHANIEL EDWARD	
			ART UNIT	PAPER NUMBER

3745

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/602,609

Applicant(s)

RAWLINSON, ANTHONY J.

Examiner

Nathan Wiehe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 06252003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 25 June 2003 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Titles are underlined;

On page 2, line 32, equalisation is misspelled;

On page 3, line 10, pressurises is misspelled;

On page 3, line 11, equalise is misspelled; and

On page 4, line 19, millimetre is misspelled.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 6, 7 and 11 are objected to because of the following informalities:

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In claim 6 the term millimetre is misspelled;

In claim 7 the term lozenge is indefinite; and

In claim 11 the term aerofil is misspelled.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kennedy (5,752,801). Kennedy discloses a turbine engine's airfoil (1) including coolant channels (32), of a wedge shape and decreasing cross-section, with transfer passages (36). The transfer passages (36) are provided on both sides of each coolant channel (32) and are inherently sized for proper flow balance across the coolant channels. Kennedy also discloses multiple round transfer passages (36) that are substantially perpendicular to the coolant channels (32) and staggered relative to the major axis of the airfoil (1). Kennedy also discloses a first transfer passage (36) located at the upstream end (not referenced) of each coolant channel (32). The claimed phrase "wherein the transfer passage has a cross-section determined for conformity with the outlet cross-section of a respective coolant channels of the aerofoil" is being treated as a product by process limitation. As set forth in MPEP 2113, product by process claims

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are NOT limited to the manipulations of the recited steps, only by the structure implied by the steps. Once a product appearing to be substantially the same or similar is found, a 35 U.S.C. 102/103 rejection may be made and the burden is shifted to applicant to show an unobvious difference. See MPEP 2113. It appears that the transfer passages in Kennedy would be the same or similar as those claimed.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy. Kennedy discloses an airfoil (1) comprising coolant channels (32) of decreasing cross-section with transfer passages (36). Kennedy does not disclose expressly the diameter of the transfer passage (36). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the diameter of the transfer passages be 1 millimeter because the Applicant has not disclosed that a 1 millimeter diameter transfer passage provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Kennedy's airfoil, and applicant's invention, to perform equally because the transfer passages would perform the same function of allowing coolant flow into a restricted coolant channel.

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9. Therefor, it would have been obvious to modify Kennedy to obtain the invention as specified in claim 6 because such modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Kennedy.

#### ***Prior Art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents of Keith and Morgan are cited for disclosing airfoils with coolant channels containing transfer passages.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Wiehe whose telephone number is (571)272-8648. The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nathan Wiehe  
Examiner  
Art Unit 3745



EDWARD K. LOOK  
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8/5/05